

Subject Index of Volume 145

- Ablation**
Polymers for UV and near-IR irradiation, 87
Structure property relations of photoreactive polymers designed for laser ablation, 145
- Ablation efficiency**
Preparation of metal colloids by a laser ablation technique in solution: influence of laser wavelength on the ablation efficiency (II), 201
- AFM**
Pulsed laser deposition of collagen and keratin, 209
- Asymmetry photochemistry**
External electric field effects on exciplex formation of 1,1-diphenylpropene with chiral 1,4-naphthalenedicarboxylate in PMMA polymer films, 53
- Attosecond phase modulator**
Development of attosecond optical-phase manipulation for the wave-packet engineering, 17
- Azobenzene polymer**
Photofabrication of surface relief structure — mechanism and application, 35
- Calixarene**
Intracomplex electron transfer in a hydrogen-bonded calixarene-porphyrin conjugate: tweezers for a quinone, 123
- Chameleon-type display**
Preparation of a structural color forming system by polypeptide-based LB films, 101
- Chiral sensitizer**
External electric field effects on exciplex formation of 1,1-diphenylpropene with chiral 1,4-naphthalenedicarboxylate in PMMA polymer films, 53
- Chirality**
Magnetic-dipole nonlinearities in chiral materials, 113
- Collagen**
Characterization of water contribution to excimer laser ablation of collagen, 195
- Collagen and keratin**
Pulsed laser deposition of collagen and keratin, 209
- Collagen gel**
Characterization of water contribution to excimer laser ablation of collagen, 195
- Control of photochemical reaction**
External electric field effects on exciplex formation of 1,1-diphenylpropene with chiral 1,4-naphthalenedicarboxylate in PMMA polymer films, 53
- Copper**
Preparation of metal colloids by a laser ablation technique in solution: influence of laser wavelength on the ablation efficiency (II), 201
- Denaturation**
Characterization of water contribution to excimer laser ablation of collagen, 195
- Dendrimers**
Femtosecond fluorescence upconversion study of rigid dendrimers containing peryleneimide chromophores at the rim, 61
- Density functional theory calculation**
Reactive intermediates formed by the consecutive photolyses of naphthalenetetracarboxylic dianhydrides: direct observation of reactive intermediates generated by laser-induced reaction in low-temperature argon matrices, 3
- Dithiolate**
Sensitization of nanocrystalline TiO₂ film by ruthenium(II) diimine dithiolate complexes, 135
- Doped PMMA**
A comparative examination of photoproducts formed in the 248 and 193 nm ablation of doped PMMA, 229
- Dye**
A new method to make dye-sensitized nanocrystalline solar cells at room temperature, 107
- Dye sensitized TiO₂-based solar cells**
Separation of linkage isomers of trithiocyanato (4,4',4''-tricarboxy-2,2',6,2''-terpyridine)ruthenium(II) by pH-titration method and their application in nanocrystalline TiO₂-based solar cells, 79
- Effect of Co**
Laser ablation at 308 nm for the mixture target of 3,4,9,10-perylene-tetracarboxylic dianhydride with Co powder — remarkable enhancement on elimination efficiency of anhydride groups, 165
- Electric field effect**
External electric field effects on exciplex formation of 1,1-diphenylpropene with chiral 1,4-naphthalenedicarboxylate in PMMA polymer films, 53
- Electroabsorption spectrum**
External electric field effects on exciplex formation of 1,1-diphenylpropene with chiral 1,4-naphthalenedicarboxylate in PMMA polymer films, 53
- Electrode**
A new method to make dye-sensitized nanocrystalline solar cells at room temperature, 107
- Electrofluorescence spectrum**
External electric field effects on exciplex formation of 1,1-diphenylpropene with chiral 1,4-naphthalenedicarboxylate in PMMA polymer films, 53
- Electron transfer**
Intracomplex electron transfer in a hydrogen-bonded calixarene-porphyrin conjugate: tweezers for a quinone, 123
- Energy structure**
Energy structure and photocatalytic activity for water splitting of Sr₂(Ta_{1-x}Nb_x)₂O₇ solid solution, 129
- Energy transfer**
Femtosecond fluorescence upconversion study of rigid dendrimers containing peryleneimide chromophores at the rim, 61
- Excimer**
Origin of the stabilization energy of perylene excimer as studied by fluorescence and near-IR transient absorption spectroscopy, 23
- Excimer fluorescence**
Origin of the stabilization energy of perylene excimer as studied by fluorescence and near-IR transient absorption spectroscopy, 23

Excimer lamps

Structure property relations of photoreactive polymers designed for laser ablation, 145

Excimer laser ablation

Characterization of water contribution to excimer laser ablation of collagen, 195

Exciplex fluorescence

External electric field effects on exciplex formation of 1,1-diphenylpropene with chiral 1,4-naphthalenedicarboxylate in PMMA polymer films, 53

Film

Effect of polymer addition and temperature on the structure of silicon-based polymer films deposited by excimer laser ablation of hexaphenyldisilane, 223

Fluence

Preparation of metal colloids by a laser ablation technique in solution: influence of laser wavelength on the ablation efficiency (II), 201

Fluorescence spectroscopy

Femtosecond fluorescence upconversion study of rigid dendrimers containing peryleneimide chromophores at the rim, 61

Hexaphenyldisilane

Effect of polymer addition and temperature on the structure of silicon-based polymer films deposited by excimer laser ablation of hexaphenyldisilane, 223

High-density optical data storage

Photofabrication of surface relief structure — mechanism and application, 35

Fabrication of narrow surface relief features in a side-chain azobenzene polyester with a scanning near-field microscope, 49

High-resolution lithography

Fabrication of narrow surface relief features in a side-chain azobenzene polyester with a scanning near-field microscope, 49

Hydrogen bond

Intracomplex electron transfer in a hydrogen-bonded calixarene-porphyrin conjugate: tweezers for a quinone, 123

Kinetics

Femtosecond fluorescence upconversion study of rigid dendrimers containing peryleneimide chromophores at the rim, 61

Laser ablation

Laser ablation at 308 nm for the mixture target of 3,4,9,10-perylenetetracarboxylic dianhydride with Co powder — remarkable enhancement on elimination efficiency of anhydride groups, 165

The role of the photochemical fragmentation in laser ablation: a molecular dynamics study, 173

Ultrafast microscopy of laser ablation of refractory materials: ultra low threshold stress-induced ablation, 183

Preparation of metal colloids by a laser ablation technique in solution: influence of laser wavelength on the ablation efficiency (II), 201

Laser-induced decomposition and ablation dynamics studied by nanosecond interferometry. 3. A polyurethane film, 215

Effect of polymer addition and temperature on the structure of silicon-based polymer films deposited by excimer laser ablation of hexaphenyldisilane, 223

Laser micro-fabrication

Femtosecond laser micro-fabrication for tailoring photonic crystals in resins and silica, 41

Laser photolysis

Reactive intermediates formed by the consecutive photolyses of naphthalenetetracarboxylic dianhydrides: direct observation of reactive intermediates generated by laser-induced reaction in low-temperature argon matrices, 3

Laser plasma thruster

Polymers for UV and near-IR irradiation, 87

Structure property relations of photoreactive polymers designed for laser ablation, 145

Laser-induced expansion

Laser-induced decomposition and ablation dynamics studied by nanosecond interferometry. 3. A polyurethane film, 215

Laser-induced melting

Nanosecond photo-fusion of microcrystals on a polymer film observed with time-resolved ultramicroscopy, 159

LB film

Preparation of a structural color forming system by polypeptide-based LB films, 101

Linkage isomers

Separation of linkage isomers of trithiocyanato (4,4',4''-tricarboxy-2,2',6,2''-terpyridine)ruthenium(II) by pH-titration method and their application in nanocrystalline TiO₂-based solar cells, 79

Matrix isolation

Reactive intermediates formed by the consecutive photolyses of naphthalenetetracarboxylic dianhydrides: direct observation of reactive intermediates generated by laser-induced reaction in low-temperature argon matrices, 3

Metal colloids

Preparation of metal colloids by a laser ablation technique in solution: influence of laser wavelength on the ablation efficiency (II), 201

Micro-fabrication

Photofabrication of surface relief structure — mechanism and application, 35

Microoptic

Structure property relations of photoreactive polymers designed for laser ablation, 145

Micro-optics

Polymers for UV and near-IR irradiation, 87

Molecular dynamics

The role of the photochemical fragmentation in laser ablation: a molecular dynamics study, 173

Nanocomposite electrode

Preparation of Pt/TiO₂ nanocomposite thin films by pulsed laser deposition and their photoelectrochemical behaviors, 11

Nanosecond interferometry

Laser-induced decomposition and ablation dynamics studied by nanosecond interferometry. 3. A polyurethane film, 215

Nanosecond photo-fusion

Nanosecond photo-fusion of microcrystals on a polymer film observed with time-resolved ultramicroscopy, 159

Nanostructured

A new method to make dye-sensitized nanocrystalline solar cells at room temperature, 107

Naphthalenetetracarboxylic dianhydride

Reactive intermediates formed by the consecutive photolyses of naphthalenetetracarboxylic dianhydrides: direct observation of reactive intermediates generated by laser-induced reaction in low-temperature argon matrices, 3

Naphthdiyne

Reactive intermediates formed by the consecutive photolyses of naphthalenetetracarboxylic dianhydrides: direct observation of reactive intermediates generated by laser-induced reaction in low-temperature argon matrices, 3

Near-field optical microscope

Fabrication of narrow surface relief features in a side-chain azobenzene polyester with a scanning near-field microscope, 49

Near-IR transient absorption

Origin of the stabilization energy of perylene excimer as studied by fluorescence and near-IR transient absorption spectroscopy, 23

Niobate

Energy structure and photocatalytic activity for water splitting of Sr₂(Ta_{1-x}Nb_x)₂O₇ solid solution, 129

Optical interference

- Development of attosecond optical-phase manipulation for the wavepacket engineering, 17

Perylene

- Origin of the stabilization energy of perylene excimer as studied by fluorescence and near-IR transient absorption spectroscopy, 23

Perylenetetracarboxylic dianhydride (PTCDA)

- Laser ablation at 308 nm for the mixture target of 3,4,9,10-perylenetetracarboxylic dianhydride with Co powder — remarkable enhancement on elimination efficiency of anhydride groups, 165

Phase mask

- Polymers for UV and near-IR irradiation, 87
- Structure property relations of photoreactive polymers designed for laser ablation, 145

Photocatalyst

- Energy structure and photocatalytic activity for water splitting of $\text{Sr}_2(\text{Ta}_{1-x}\text{Nb}_x)_2\text{O}_7$ solid solution, 129

Photochemical behavior

- Surface characterization and photochemical behavior of poly(ethylene terephthalate) and TiO_2 /poly(ethylene terephthalate) interface by using sum-frequency generation, 93

Photochemical decomposition

- Laser-induced decomposition and ablation dynamics studied by nano-second interferometry. 3. A polyurethane film, 215

Photochemical fragmentation

- The role of the photochemical fragmentation in laser ablation: a molecular dynamics study, 173

Photochemistry

- A comparative examination of photoproducts formed in the 248 and 193 nm ablation of doped PMMA, 229

Photoelectrochemical

- A new method to make dye-sensitized nanocrystalline solar cells at room temperature, 107

Photoelectrode

- Preparation of Pt/TiO_2 nanocomposite thin films by pulsed laser deposition and their photoelectrochemical behaviors, 11

Photoinduced surface relief

- Photofabrication of surface relief structure — mechanism and application, 35

Photonic bandgap

- Femtosecond laser micro-fabrication for tailoring photonic crystals in resins and silica, 41

Photonic crystal

- Femtosecond laser micro-fabrication for tailoring photonic crystals in resins and silica, 41

Photopolymer

- Polymers for UV and near-IR irradiation, 87
- Structure property relations of photoreactive polymers designed for laser ablation, 145

Photopolymerizing resin

- Femtosecond laser micro-fabrication for tailoring photonic crystals in resins and silica, 41

Photoproducts

- A comparative examination of photoproducts formed in the 248 and 193 nm ablation of doped PMMA, 229

Photosensitizer

- Sensitization of nanocrystalline TiO_2 film by ruthenium(II) diimine dithiolate complexes, 135
- New Ru(II) phenanthroline complex photosensitizers having different number of carboxyl groups for dye-sensitized solar cells, 117

Poly(dimethylsilane)

- Effect of polymer addition and temperature on the structure of silicon-based polymer films deposited by excimer laser ablation of hexaphenyldisilane, 223

Poly(ethylene terephthalate)

- Surface characterization and photochemical behavior of poly(ethylene terephthalate) and TiO_2 /poly(ethylene terephthalate) interface by using sum-frequency generation, 93

Polypeptide

- Preparation of a structural color forming system by polypeptide-based LB films, 101

Polyperinaphthalene film

- Laser ablation at 308 nm for the mixture target of 3,4,9,10-perylenetetracarboxylic dianhydride with Co powder — remarkable enhancement on elimination efficiency of anhydride groups, 165

Polyurethane film

- Laser-induced decomposition and ablation dynamics studied by nano-second interferometry. 3. A polyurethane film, 215

Porphyrin

- Intracomplex electron transfer in a hydrogen-bonded calixarene-porphyrin conjugate: tweezers for a quinone, 123

Pulsed laser deposition

- Preparation of Pt/TiO_2 nanocomposite thin films by pulsed laser deposition and their photoelectrochemical behaviors, 11
- Pulsed laser deposition of collagen and keratin, 209

Radiationless transitions

- Vibronic couplings and radiationless transitions between the lowest 1Bu and the first excited 2Ag state of linear polyenes, 71

Reactive intermediate

- Reactive intermediates formed by the consecutive photolyses of naphthalenetetracarboxylic dianhydrides: direct observation of reactive intermediates generated by laser-induced reaction in low-temperature argon matrices, 3

Ru(II) phenanthroline complex

- New Ru(II) phenanthroline complex photosensitizers having different number of carboxyl groups for dye-sensitized solar cells, 117

Ruthenium complexes

- Separation of linkage isomers of trithiocyanato (4,4',4''-tricarboxy-2,2',6,2''-terpyridine)ruthenium(II) by pH-titration method and their application in nanocrystalline TiO_2 -based solar cells, 79

- Sensitization of nanocrystalline TiO_2 film by ruthenium(II) diimine dithiolate complexes, 135

Second-harmonic generation

- Magnetic-dipole nonlinearities in chiral materials, 113

Sensitizers

- Separation of linkage isomers of trithiocyanato (4,4',4''-tricarboxy-2,2',6,2''-terpyridine)ruthenium(II) by pH-titration method and their application in nanocrystalline TiO_2 -based solar cells, 79

Side-chain azobenzene

- Fabrication of narrow surface relief features in a side-chain azobenzene polyester with a scanning near-field microscope, 49

Silica glass

- Femtosecond laser micro-fabrication for tailoring photonic crystals in resins and silica, 41

Silicon

- Preparation of a structural color forming system by polypeptide-based LB films, 101

Silicon-based polymer

- Effect of polymer addition and temperature on the structure of silicon-based polymer films deposited by excimer laser ablation of hexaphenyldisilane, 223

Silver

- Preparation of metal colloids by a laser ablation technique in solution: influence of laser wavelength on the ablation efficiency (II), 201

Singlet-singlet annihilation

- Femtosecond fluorescence upconversion study of rigid dendrimers containing peryleneimide chromophores at the rim, 61

Solar cell

- A new method to make dye-sensitized nanocrystalline solar cells at room temperature, 107
- New Ru(II) phenanthroline complex photosensitizers having different number of carboxyl groups for dye-sensitized solar cells, 117
- Sensitization of nanocrystalline TiO_2 film by ruthenium(II) diimine dithiolate complexes, 135

Solid solution

- Energy structure and photocatalytic activity for water splitting of $\text{Sr}_2(\text{Ta}_{1-x}\text{Nb}_x)_2\text{O}_7$ solid solution, 129

Solution

- Preparation of metal colloids by a laser ablation technique in solution: influence of laser wavelength on the ablation efficiency (II), 201

Structural color

- Preparation of a structural color forming system by polypeptide-based LB films, 101

Sum-frequency generation

- Surface characterization and photochemical behavior of poly(ethylene terephthalate) and TiO_2 /poly(ethylene terephthalate) interface by using sum-frequency generation, 93

Supramolecule

- Intracomplex electron transfer in a hydrogen-bonded calixarene-porphyrin conjugate: tweezers for a quinone, 123

Surface characterization

- Surface characterization and photochemical behavior of poly(ethylene terephthalate) and TiO_2 /poly(ethylene terephthalate) interface by using sum-frequency generation, 93

Tantalate

- Energy structure and photocatalytic activity for water splitting of $\text{Sr}_2(\text{Ta}_{1-x}\text{Nb}_x)_2\text{O}_7$ solid solution, 129

Thin film

- Preparation of Pt/ TiO_2 nanocomposite thin films by pulsed laser deposition and their photoelectrochemical behaviors, 11

Time resolved spectroscopy

- Femtosecond fluorescence upconversion study of rigid dendrimers containing peryleneimide chromophores at the rim, 61

Time-resolved ultramicroscope

- Nanosecond photo-fusion of microcrystals on a polymer film observed with time-resolved ultramicroscopy, 159

 TiO_2 /PET interface

- Surface characterization and photochemical behavior of poly(ethylene terephthalate) and TiO_2 /poly(ethylene terephthalate) interface by using sum-frequency generation, 93

Titanium nitride

- Ultrafast microscopy of laser ablation of refractory materials: ultra low threshold stress-induced ablation, 183

TOF-MS

- Structure property relations of photoreactive polymers designed for laser ablation, 145

Transfer integral

- Origin of the stabilization energy of perylene excimer as studied by fluorescence and near-IR transient absorption spectroscopy, 23

Transoctatetraene

- Vibronic couplings and radiationless transitions between the lowest 1Bu and the first excited 2Ag state of linear polyenes, 71

Tweezers

- Intracomplex electron transfer in a hydrogen-bonded calixarene-porphyrin conjugate: tweezers for a quinone, 123

Ultrafast microscopy

- Ultrafast microscopy of laser ablation of refractory materials: ultra low threshold stress-induced ablation, 183

UV ablation

- A comparative examination of photoproducts formed in the 248 and 193 nm ablation of doped PMMA, 229

Vibronic coupling

- Vibronic couplings and radiationless transitions between the lowest 1Bu and the first excited 2Ag state of linear polyenes, 71

Viscous fluid model

- Photofabrication of surface relief structure — mechanism and application, 35

Water splitting

- Energy structure and photocatalytic activity for water splitting of $\text{Sr}_2(\text{Ta}_{1-x}\text{Nb}_x)_2\text{O}_7$ solid solution, 129

Wavelength

- Preparation of metal colloids by a laser ablation technique in solution: influence of laser wavelength on the ablation efficiency (II), 201

Wave-packet engineering

- Development of attosecond optical-phase manipulation for the wave-packet engineering, 17

Guide for Authors

Submission of Papers

Authors are requested to submit their manuscripts to

Editor-in-Chief: Professor R.P. Wayne

Physical and Theoretical Chemistry Laboratory
South Parks Road
Oxford OX1 3QZ
UK

FAX: +44 (1865) 275410

E-MAIL: jphoto@physchem.ox.ac.uk

Authors in the USA and Canada may submit their manuscripts to the North American Editor:

Professor R.P. Steer

Thorvaldson Building
University of Saskatchewan
110 Science Place
Saskatoon, SK
Canada S7N 5C9
FAX: +1 (306) 966 4730
E-MAIL: steer@sask.usask.ca

Authors in Asia should submit their manuscripts to the Asian Editor:

Professor H. Masuhara

Faculty of Engineering
Department of Applied Physics
Osaka University
Yamadaoka 2-1
Suita, Osaka 565-0871
Japan
FAX: +81 6 6876 8580
E-MAIL: masuhara@ap.eng.osaka-u.ac.jp

The full postal address, fax and telephone numbers, and e-mail address of the corresponding author must be given on the first (title) page of the manuscript.

Contributions are accepted on the understanding that authors have obtained the necessary authority for publication. Submission of an article is understood to imply that the article is original and unpublished and is not being considered for publication elsewhere. Upon acceptance of an article by the journal, the author(s) will be asked to transfer the copyright of the article to the publisher. This transfer will ensure the widest possible dissemination of information.

Language

Papers will be published in English.

Authors in Japan please note that information about how to have the English of your paper checked corrected and improved (*before submission*) is available from: Elsevier Science Japan, Editorial Service, 1-9-15 Higashi Azabu, Minato-ku, Tokyo 106-0044, Japan; Tel.: +81-3-5561-5032; Fax: +81-3-5561-5045; E-mail: info@elsevier.co.jp

Manuscript Preparation

Three copies of the manuscript should be submitted, in double-spaced typing on pages of uniform size with a wide margin on the left. Some flexibility of presentation will be allowed but authors are urged to arrange the subject matter clearly under headings such as Introduction, Experimental details, Results, Discussion, etc. References should be numbered consecutively (numerals in square brackets) throughout the text and collected together in a reference list at the end of the paper. Journal titles should be abbreviated according to the Chemical Abstracts Service Source Index, 1970 edition, and supplements. The abbreviated title should be followed by volume number, year (in parentheses) and page number. Authors are reminded that delays in publication may occur if the instructions for submission and disk and manuscript preparation are not strictly followed. Authors are strongly recommended to submit disks to aid rapid processing. To facilitate communication, authors are requested to provide their current e-mail address, phone and fax number.

Illustrations

Line drawings and cyclic or aromatic formulae should be in a form suitable for reproduction, drawn in Indian ink on drawing paper. They should preferably all require the same degree of reduction, and should be submitted on paper of the same size as, or smaller than, the main text to prevent damage in transit. Photographs should be submitted as clear black-and-white prints on glossy paper. Each illustration must be clearly numbered. "Quantity calculus" notation should be used for the labelling of the graph axes. Legends to the illustrations must be submitted in a separate list. All tables and illustrations should be numbered consecutively and separately throughout the paper.

Offprints

Twenty-five offprints are provided free of charge to the corresponding author. Extra offprints can be ordered at prices shown on the offprint order form.

Further Information

All questions arising after acceptance of a paper, especially those concerning proofs, should be directed to Elsevier Science Ireland, Elsevier House, Brookvale Plaza, East Park, Shannon, Co. Clare, Ireland (Tel.: +353 (61) 709600; Fax: +353 (61) 709111; E-mail: postmaster@elsevier.ie). The full and complete Instructions to Authors can be found on the World Wide Web: access under <http://www.elsevier.com>.

Choose from broad collections of primary journal literature and powerful secondary databases, all deliverable via the Internet or your local Intranet—building blocks for the digital library you need.

SCIENCE  DIRECT®

For the Digital Library You Want

ScienceDirect offers desktop access to over 1 million articles published in nearly 1,200 journals spanning 16 fields of science and provides researchers with some 2 million bibliographic citations and abstracts. Access may also be provided to an additional 30 million abstracts via ScienceDirect's secondary databases.

Unprecedented content, navigability and customization options

Whether you choose the breadth of the ScienceDirect multi-publisher platform or one of our discipline or industry-focused solutions, you'll be providing your institution with a dynamic, efficient and integrated solution to access the world's critical STM literature.

- ScienceDirect Online
- ScienceDirect OnSite
- ScienceDirect Web editions
- ScienceDirect Gateway
- ScienceDirect Bibliographic Database Collection
- ScienceDirect Industry Solutions: Pharmaceutical
- ADONIS®
- ScienceServer®

www.sciencedirect.com

NEW YORK
+1 212 633 3809
usinfo@sciencedirect.com

AMSTERDAM
+31 20 485 3767
nlinfo@sciencedirect.com

SINGAPORE
+65 434 3716
sginfo@sciencedirect.com

TOKYO
+81 3 5561 5035
jpinfo@sciencedirect.com

RIO DE JANEIRO
+55 21 509 5340
brinfo@sciencedirect.com



1010-6030(20011203)145:3;1-1